United States Environmental Protection Agency
Region VI
POLLUTION REPORT

Date: Wednesday, September 23, 2009
From: Bill Rhotenberry, OSC

Subject: Continuation of Activities
Norphlet Chemical Inc.
600 MacMillian Road, Norphlet, AR
Latitude: 33.3093000
Longitude: -92.6560000

POLREP No.:	16	**Site #:**	A6N8
Reporting Period:		**D.O. #:**	
Start Date:	4/16/2009	**Response Authority:**	CERCLA
Mob Date:	4/16/2009	**Response Type:**	Emergency
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Site Description

Norphlet Chemical Inc. (NCI) is located outside El Dorado, AR at the location of the former Macmillan Oil Refinery (a previous Non-NPL Removal Action). NCI is a chemical manufacturing facility in the business of producing a refrigerant (HFC-134A) used in automobiles. The primary raw materials used for producing this product is Anhydrous Hydrogen Fluoride, Trichloroethylene, and a catalyst. The company attempted to produce the intended product but was unable to do so. In September 2008, the company laid off all of its employees.

EPA became aware of this facility in March 2009 and immediately informed the ADEQ. EPA offered its assistance if deemed necessary by the ADEQ. On April 15, 2009, DHS conducted an Infrastructure Protection Inspection of the facility and was alarmed with its condition and the fact that it was abandoned. On April 15, 2009, DHS contacted EPA about their concerns with the site. The major concern was that the abandoned site had containers of Anhydrous Hydrogen Fluoride (AHF) and mixtures of AHF, TCE, and intermediate refrigerants. In addition, the condition of these containers were questionable. EPA and DHS contacted State authorities and participated in a call concerning the site. On April 16, EPA received a request from ADEQ to address the situation at the site.

EPA dispatched their START Contractors to begin air monitoring. EPA OSC Jones arrived on-site on Friday, April 17, 2009 and met with Federal, State, County, and City officials and evaluated the site. OSC Jones determined that an Imminent and Substantial Endangerment existed as a result of the abandonment of the facility, the conditions of the tankage, and the close proximity of the school and surrounding residents to the facility. On April 16, 2009, Union County Judge Bobby Edmonds declared an emergency. Because of the emergency order and the close proximity of the site to the school, the school was closed on Friday, April 17.

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EPA mobilized their ERRS Contractor and began transferring the AHF mixtures from the onsite tanks into tanker trailers which would be shipped offsite for disposal.

Current Activities

From August 8 through August 18, 2009 one JB Kelley Tanker and two Dana Tanker Trailers were shipped to Veolia Technical Solutions in Port Arthur, Texas for disposal. During this period, a total of 46,140 pounds of HF contaminated waste was disposed of at the Veolia facility. In all, a total of eight tanker trailers of HF contaminated waste were shipped off site for disposal with a total of 150,480 pounds of HF contaminated waste. In addition to the eight tankers which shipped waste to Veolia there were an additional two tankers (1 JBK and 1 Dana) onsite which underwent transfers due to faulty valves. These two tankers brought the total number of trailers to be decontaminated to ten.

EPA and contractors remobilized to the Norphlet site on August 6, 2009 and began decontamination activities. Extensive decontamination procedures were conducted on each trailer, which included the following; purging each trailer with nitrogen, rinsing with 1000 gallons of water, filling each tanker completely full with a hydrated lime solution and allowing it to soak for 8 hours, then pressure washing the interior of each tanker. Upon completion it was noted that some residual rust and staining remained. An additional decontamination step was added which included using a soda blaster (sodium bicarbonate) that provided a high pressure nonabrasive method of removing the residual rust. After the soda blaster decontamination step only light rust and staining remained.

On August 20, 2009 EPA metallurgists from Baker Engineering and Risk Consultants, Inc. mobilized to the site and manually inspected each of the tanker trailers. A representative piece of metal was cut from the baffle in JBK tanker K805 and a portion of the metal dip tube from Dana Tanker 1190 were submitted to Baker for analysis. Based on the field observations of the metallurgists, it was suggested that two additional steps be added to the decon process. An interior rinse using Chlor-Rid, a stainless steel cleaning compound that removes residual chloride ions was suggested as well as passivation. Passivation dissolves any impurities on the surface of the stainless steel and restores the hard non-reactive surface film that inhibits further corrosion. "Astroglo-P", a nitric acid and hydrofluoric acid based compound was used for passivation activities. From August 21 through August 31, 2009, each of the empty tanker trailers onsite were cleaned with Chlor-rid solution and passivated with Astroglo-P.

On September 1 2009, EPA subcontractors Alltech Inspection conducted internal thickness testing on each of the nine fully decontaminated trailers. Each tanker was tested for thickness at seventy-five independent points within the tanker. Alltech testing results indicated that each tanker met existing engineering guidelines for metal thickness. On September 2, 2009, the Baker metallurgist returned to the site and conducted a follow-up visual inspection of each tanker. EPA is currently awaiting the final report of the metallurgy inspection and metal sample analysis.

On September 3, 2009, EPA subcontractor (EQ Industrial Services) transported approximately 555 pounds of lab pack waste from the Norphlet Chemical laboratory to the disposal facility in Tampa, Florida.

EPA and contractors demobilized from the site on September 3, 2009, to await the return of the final tanker (Dana #1301) from Veolia. Dana #1301 contains hydrofluoric acid and sodium fluoride. EPA and Veolia anticipated that the disposal facility would not be able to off load the sodium fluoride solids. Dana tanker #1301 was returned to site on September 15, 2009 with

approximately 14,840 pounds of HF saturated sodium fluoride. EPA and contractors remobilized to the site on September 14 for final tanker decon activities. Due to the solidified sodium fluoride and residual HF material, the tanker posed extensive technical difficulties for decontamination. Additional manpower and equipment was required to remove the material. Upon removal, the same decon steps were followed as described for the other tankers.

Next Steps

No additional site activities are scheduled once decontamination operations are completed.

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United States Environmental Protection Agency
Region VI
POLLUTION REPORT

Date: Sunday, May 10, 2009
From: Gary Moore

Subject: Norphlet Chemical Inc.
600 MacMillian Road, Norphlet, AR
Latitude: 33.3093000
Longitude: -92.6560000

POLREP No.:	7	**Site #:**	A6N8
Reporting Period:		**D.O. #:**	
Start Date:	4/16/2009	**Response Authority:**	CERCLA
Mob Date:	4/16/2009	**Response Type:**	Emergency
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Completion Date:		**Incident Category:**	
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Site Description

Norphlet Chemical Inc (NCI) is located in Norphlet, AR which is just outside El Dorado, AR at the location of the former Macmillan Oil Refinery (a previous Superfund Removal Site). NCI was a chemical manufacturing facility in business to produce the refrigerant (HFC 134a) used in automobiles. The primary raw materials used for producing this product are Anhydrous Hydrogen Fluoride, Trichloroethylene, and a catalyst. The company attempted to produce the intended product but was unable to do so. In September 2008, the company laid off all of its employees.

EPA became aware of this facility in March 2009 while in the process of setting up a Risk Management Plan (RMP) inspection. The EPA immediately informed the ADEQ. EPA offered its assistance if deemed necessary by the ADEQ.

On March 11, 2009, ADEQ conducted a site inspection at Norphlet Chemical. The ADEQ inspection noted corrosion on the relief valves for the hydrofluoric acid tanks. ADEQ also noted activity at the site including employees of Jones-Hamilton actively assisting with the removal of chemical product from the site. During the site inspection, ADEQ spoke to a member of the Norphlet Chemical Board of Directors as well as the former plant manager who described the facility processes.

On April 15, 2009, DHS conducted an Infrastructure Protection Inspection of the facility and was alarmed with its condition and the fact that it was abandoned by NCI. DHS contacted EPA about their concerns with the site. The major concern was that the abandoned site had containers of Anhydrous Hydrogen Fluoride (AHF) and mixtures of AHF, TCE, and intermediate refrigerants in tanks deemed to be in poor condition by DHS. The EPA notified ADEQ about the DHS interest in the site.

On April 16, EPA participated in a conference call with DHS and Federal, State, Local, and other

representatives concerning the site. Following this call, EPA received a request from ADEQ to address the situation at the site. EPA dispatched it START Contractors to begin air monitoring. EPA OSC Jones arrived on-site on Friday, April 17, 2009 and met with Federal, State, County, and City officials and evaluated the site. OSC Jones determined that an Imminent and Substantial Endangerment existed as a result of the abandonment of the facility, the conditions of the tankage, and the close proximity of the school and surrounding residents to the facility. On April 16, 2009, Union County Judge Bobby Edmonds declared an emergency. Because of the emergency order and the close proximity of the site to the school, the school elected to close on Friday, April 17.

There are 5 tanks of immediate concern that will be addressed by the EPA. These tanks are as follows:

o Tank TT10 (13,800 gallon capacity) - 13,400 gallons of a liquid mixture; 75% AHF and 25% TCE and intermediate refrigerants;
o Tank TT11 (13,800 gallon capacity) - 10,849 gallons of a liquid mixture; 4% AHF and 96% TCE and intermediate refrigerants;
o Tank TT13 (11,550 gallon capacity) - OF (4500 pounds) and 2,000 gallons of a AHF;
o Tank TT02 (18,213 gallon capacity): Approximately 2000 gallons of TCE;
o Tank TT01 (42,000 gallon capacity): 7,800 gallon of 98% AHF

The site has other areas of concern where chemicals are present, including an onsite laboratory, warehouse, plant area, and piping.

Current Activities

On April 19, 2009, EPA attempted to transfer material from TT11 into a tanker truck. In order to accomplish this, piping was removed from the tanks to allow the connection of a pump and hoses. The transfer operation failed due to pump failure as a result of vapor expansion which damaged the teflon diaphragm allowing pass through of material to the dry side. The system was isolated and shut down immediately. There were no injuries or significant releases of material. Additionally, the SRV's on the trucks were set to low for the pressures that existed on the tanks. The trucks were released.

The EPA and its contractors searched and contacted numerous companies about containers and tankers that would hold this material with SRVs set in the 100 to 150 psig range. Most companies did not want to carry this material as they were concerned about potential moisture issues associated with the materials and damage to their containers.

The issue with the pressures is associated with the refrigerant intermediates within the waste stream. The EPA has located companies willing and capable in assisting us in transporting and storing this material. EPA requested and obtained a DOT exemption for use of a specialty tanker used to carry dinitrogen tetroxide and hydrazine for NASA and DOD. It is listed as a MC338 but does not exactly meet those specifications.

On April 24, 2009, ultrasound tests were conducted on the tanks containing the AHF and AHF mixtures. The tests indicated a critical area on tank TT-13 and an area of concern on tank TT-10.

On April 25, 2009, EPA completed constructing a dry lime scrubber with carbon filter out of a frac tank and two totes. The frac tank contains approximately 10 feet of dry lime to scrub the AHF and carbon to scrub the organics.

On April 26 2009, EPA completed cleaning out the original tanker truck used for the first transfer attempt. The material in the truck was neutralized with a lime slurry. This truck will be released on April 27, 2009.

On April 26, 2009, TT13 was scrubbed through the scrubber to reduce the pressure on the tank. The pressure was reduced to 20 psig. It is now ready for transfer.

On April 28, 2009, the Solvay railcar was delivered for transfer of the pure AHF from TT01.

On April 30, 2009, EPA transferred the contents of TT13 into a tanker with no incident.

On May 2, 2009, EPA completed a vapor/vent system for Tank TT11. The Vapor/vent system will be processed through the site scrubber system. The valve connections were completed on the railcar to facilitate transfer of AHF from Tank TT01 into railcar.

On May 3, 2009, EPA completed the transfer of approximately 8,073 gallons of AHF material from Tank TT01 into the Solvay railcar.

On May 4, 2009, EPA transferred approximately 18,000 pounds (2,230 gallons) of material from Tank TT10 into one JB Kelly Tanker. EPA continued to vent Tank TT11 and process vapor through the scrubber system.

On May 5, 2009 EPA transferred approximately 54,100 pounds (6,700 gallons) of material from Tank TT10 into a total of three (3) JB Kelly Tankers. EPA continued to vent Tank TT11 and process vapor through the scrubber system.

On May 6, 2009, EPA completed the removal and transfer of liquid material in Tank TT10. Approximately 11,300 pounds (1,400 gallons) of material was transferred from Tank TT10 into one JB Kelly Tanker. 4,000 gallons of Trichloroethylene was transferred from Tank TT44 and transported off site to Blentech Corporation in Houston, Texas.

On May 7, 2009, EPA completed transfer of 7,200 lbs of material from tank TT11 into the same JB Kelly tanker which emptied TT10. This brought the tanker truck load to (18,400 lbs). Another JB Kelly tanker was also filled with (18,000 lbs) bringing the total of JB Kelly tankers filled to (6). EPA will release the remaining (2) JB Kelly tankers and utilize (2) Dana PIH tankers for the remaining transfers at a significant cost savings. Tank TT11 continues to vent through the scrubber system.

On May 8,2009, EPA completed installing fittings on tank TT10 in order to purge the tank with nitrogen. EPA began the nitrogen purge of tank TT10. EPA continued to vent Tank TT11 and process vapor through the scrubber system.

On May 9,2009, EPA completed the installation of fittings on the rail yard line piping from the facility in preparation for purging the line with nitrogen. EPA completed the nitrogen purge of TT10. Tank TT11 continues to vent through the scrubber system.

Planned Removal Actions

The EPA plans to address the emergency conditions at the site which include the contents of the 4 Anhydrous Hydrogen Fluoride tanks and the TCE tank. The plans are to give away the pure AHF and TCE for reuse. The remaining 3 tanks include AHF mixtures which will require disposal.

The ADEQ has requested EPA assistance to address the remaining portions of the site, which include the lab, warehouse, piping, and other miscellaneous containers located on the site. The EPA is in discussions with ADEQ on these remaining items.

The EPA contractors have constructed a scrubber system that has been added as a pretreatment scrubber for the existing facility scrubber. The scrubber is designed to scrub vapors from transfer operations.

Next Steps
EPA has completed the transfer of liquid material from Tanks TT01, TT10 and TT13. The EPA intends to begin final transfer operations from TT11 on Tuesday May 12, 2009.

The EPA is currently reviewing disposal bids to determine where the AHF wastes will go for disposal.

The EPA will continue to work closely with the local officials in notifying the public of transfer operations.

EPA will continue to conduct real time air monitoring and sampling activities as necessary until AHF and AHF mixtures are removed.

Key Issues
The EPA will need to coordinate closely with ADEQ in determining each agency's role in the cleanup following all transfers of the AHF.

The EPA will continue to work closely with the local officials in all phases of the removal action.

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